Migraine: The Pill and Pregnancy

ORAL CONTRACEPTIVES (OC) are variously thought to cause migraine, cure it or cause stroke in migraineurs. Confusion may derive from (1) coincidences due to the frequency of migraine (10 to 19 percent) and OC use (10 to 25 percent) among women in childbearing years; (2) failure to determine who had migraine before taking the pill; (3) imprecision in the diagnosis of migraine; (4) failure to distinguish between types of migraine and (5) the many different types of OC studied.

Migraine is very sensitive to hormonal changes with menarche, menses, pregnancy and menopause. "Classical" migraine (visual scotoma or scintillation) may be aggravated by pregnancy. "Common" migraine, preceded by irritability and associated with unilateral throbbing pain and vomiting, is often relieved by pregnancy. Unfortunately, most reports do not separate common from classical migraine.

Migraine develops for the first time in 4 to 17 percent of pregnant women. Pre-existing migraine is unchanged or becomes worse in 11 to 23 percent of pregnancies and improves in 80 percent. About 10 to 11 percent of women develop significant new headache when using OC. Headache may be less frequent and contraception less effective with preparations that are pure or predominantly progestin. Of those women starting use of OC for contraception who have pre-existing migraine, about 36 percent have fewer or no headaches, 18 percent have more and 46 percent are unchanged. OC or progestins used to treat migraine are no better than placebos, or only slightly so, and have significant side effects.

Pre-existing migraine has been considered a relative contraindication to use of OC in the face of inadequate data. Since stroke infrequently complicates migraines characterized by contralateral sensory or motor prodrome, and since stroke is a known complication of OC use, the combination is worrisome.

Either vascular headache developing *de novo* in women taking OC or an increase in frequency or severity of migraine accompanying use of OC may be an indication for discontinuation of OC, especially if accompanied by focal neurological symptoms. These changes with the use of OC may identify young women abnormally prone to stroke. Even mild hypertension is a strong relative contraindication to "the pill," because hypertension may aggravate previous migraine, because hypertension may identify women who are more prone to stroke when using OC and because OC themselves may cause hypertension.

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The Pill and Stroke

FEW MEDICAL ISSUES have evoked more furor in the profession, the pharmaceutical industry or the nation than the relation of oral contraceptives (OC) to stroke. Early reports, neglecting the occurence of stroke in women not using "the pill" had no population-base or control data. (A curious omission in considering the complications of contraceptives in non-pregnant young women was the lack of comparison with pregnancy.) Stroke unquestionably but uncommonly occurs in both men and women under 45 years old probably one-fourth to one-eighth as often as in the next two decades of life. One-tenth to one-third of the women so afflicted are pregnant or puerpural; many of the remainder have predisposing causes such as diabetes, hypertension, collagen disease or aneurysm.

Retrospective British studies in 1968 and 1969 showed a 6-fold to 8-fold increase in risk of hospitalization or death from cerebral infarction in OC users. A recent United States collaborative study of 598 nonpregnant women aged 15 to 44 with stroke demonstrated a 9-fold increase in relative risk of cerebral ischemia or thrombosis for women who use OC compared with those who do not. Users had 2.3 times the risk of hemorrhagic stroke. The fact that only 9 percent of the women with "thrombotic" stroke died may explain earlier failure to demonstrate the risk of OC in mortality trends. Though early reports suggested cerebral venous thrombosis would be the major problem, most autopsy or angiographic studies show that it is arterial occlusion.

Vessey estimates that only 100 of every million users of the pill will be admitted to the hospital, and that about five of these die each year from a